



California Green Innovation Index

CALIFORNIA AIR RESOURCES BOARD

Presentation by:
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November 15, 2007



About Next 10

- Founded in 2003
- Independent, Nonpartisan, Nonprofit
- Focus: Budget, Infrastructure, Green Economy
- Commissions expert research to educate, engage, empower



About the California Green Innovation Index

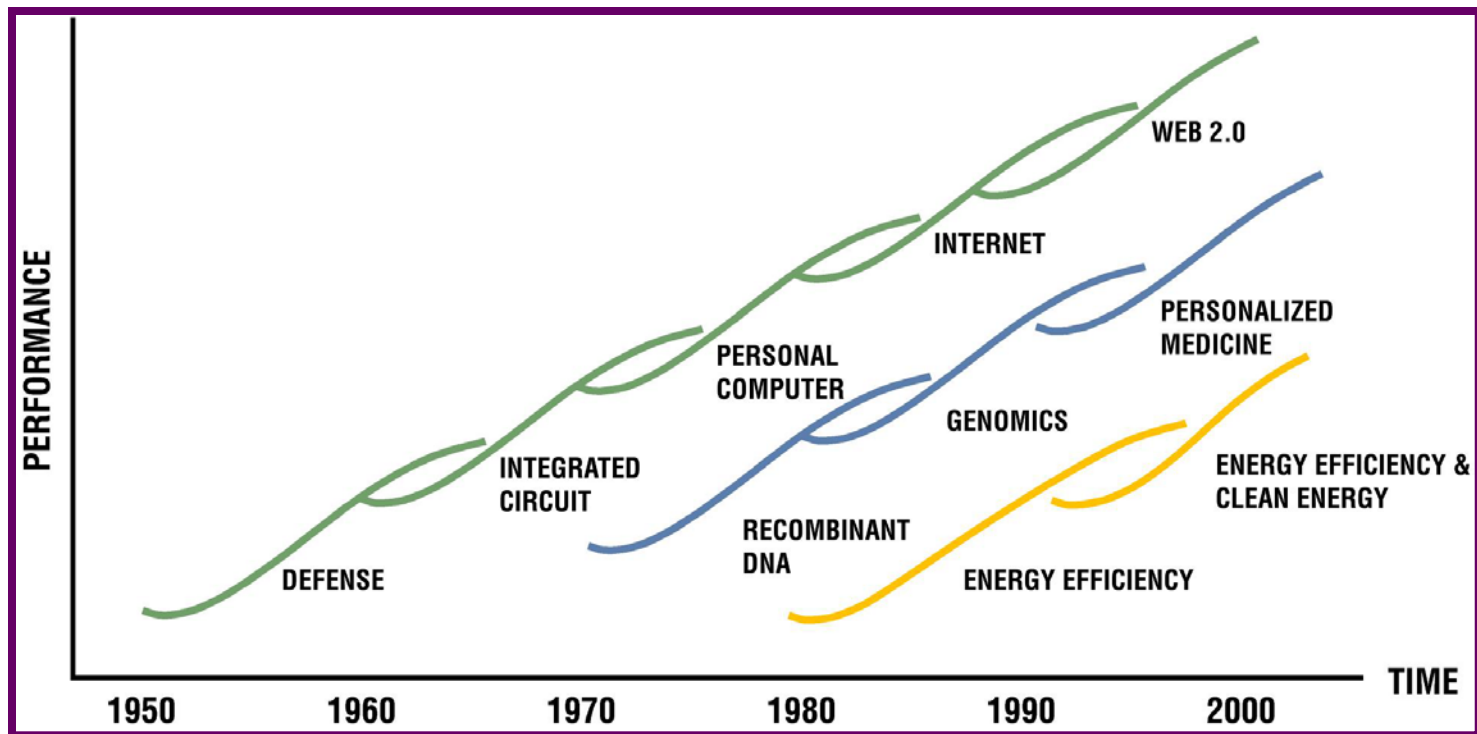
- Analyzes key economic and environmental indicators
- Green innovation has helped us reduce GHG emissions and grow the state's economy
- Tracks performance as we work toward AB 32 goals
 - Innovation is the driver of California's economic and environmental progress
 - The first wave of green innovation
 - Tracking signs of the next wave of green innovation
 - The challenge and prospects for the future

Index Senior Advisors

Ralph	Cavanagh	Natural Resources Defense Council
Michael	Hanemann	CA Climate Change Center, UC Berkeley
Hal	Harvey	The William & Flora Hewlett Foundation
Elliot	Hoffman	New Voice of Business
Van	Jones	Ella Baker Center
Dan	Kammen	Renewable & App. Energy Lab, UC Berkeley
Bruce	Klafter	Applied Materials
Joel	Makower	Executive Editor, GreenBiz.com
Walter	McGuire	McGuire & Co., Inc./ Flex Your Power
Joe	Nation	Former State Assemblyman, District 6
Manuel	Pastor	Professor of US Studies & Ethnicity, USC
Fran	Pavley	Assemblymember (2000-2006), Author AB 32
Wendy	Pulling	Pacific Gas & Electric Company
Carol	Whiteside	Great Valley Center
Tim	Woodward	Nth Power



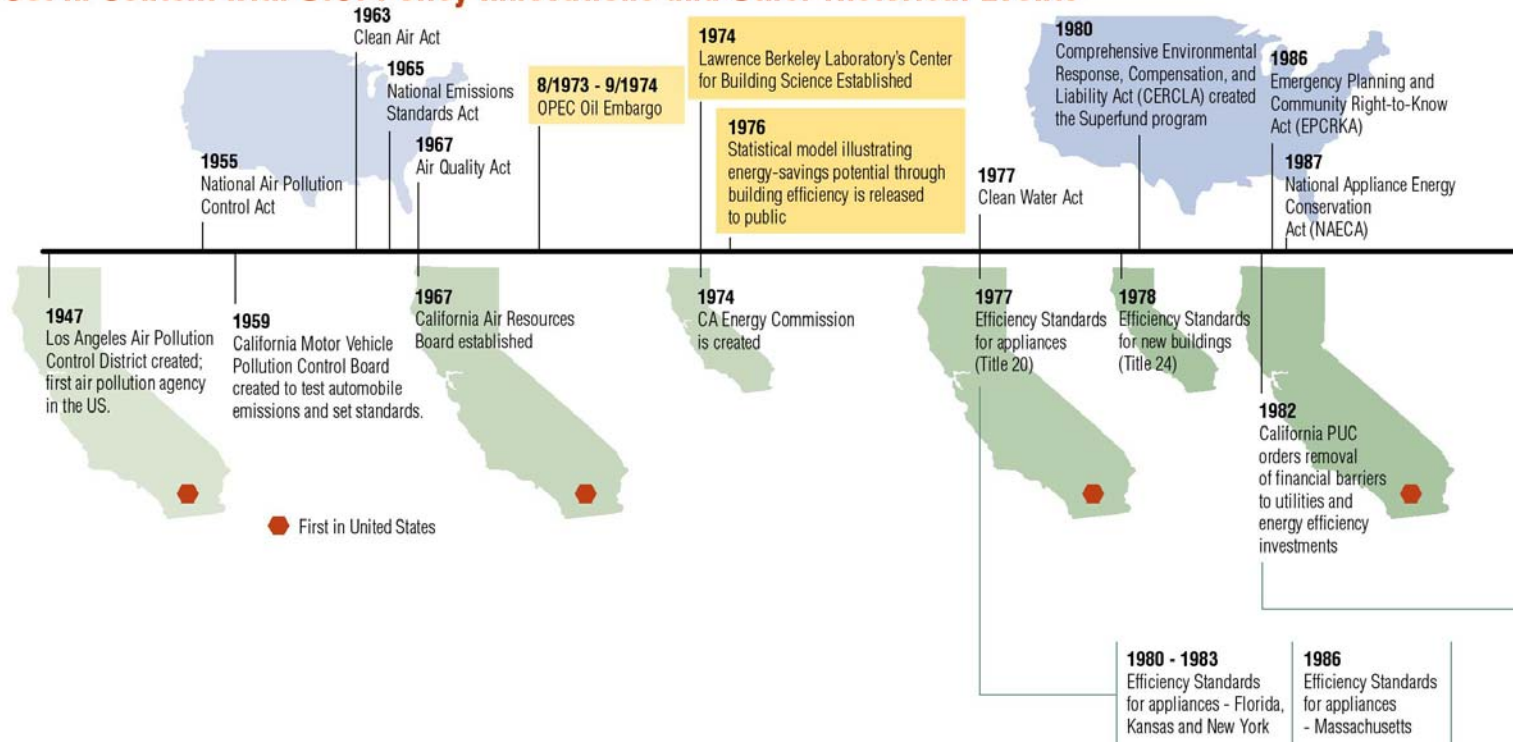
WAVES OF INNOVATION





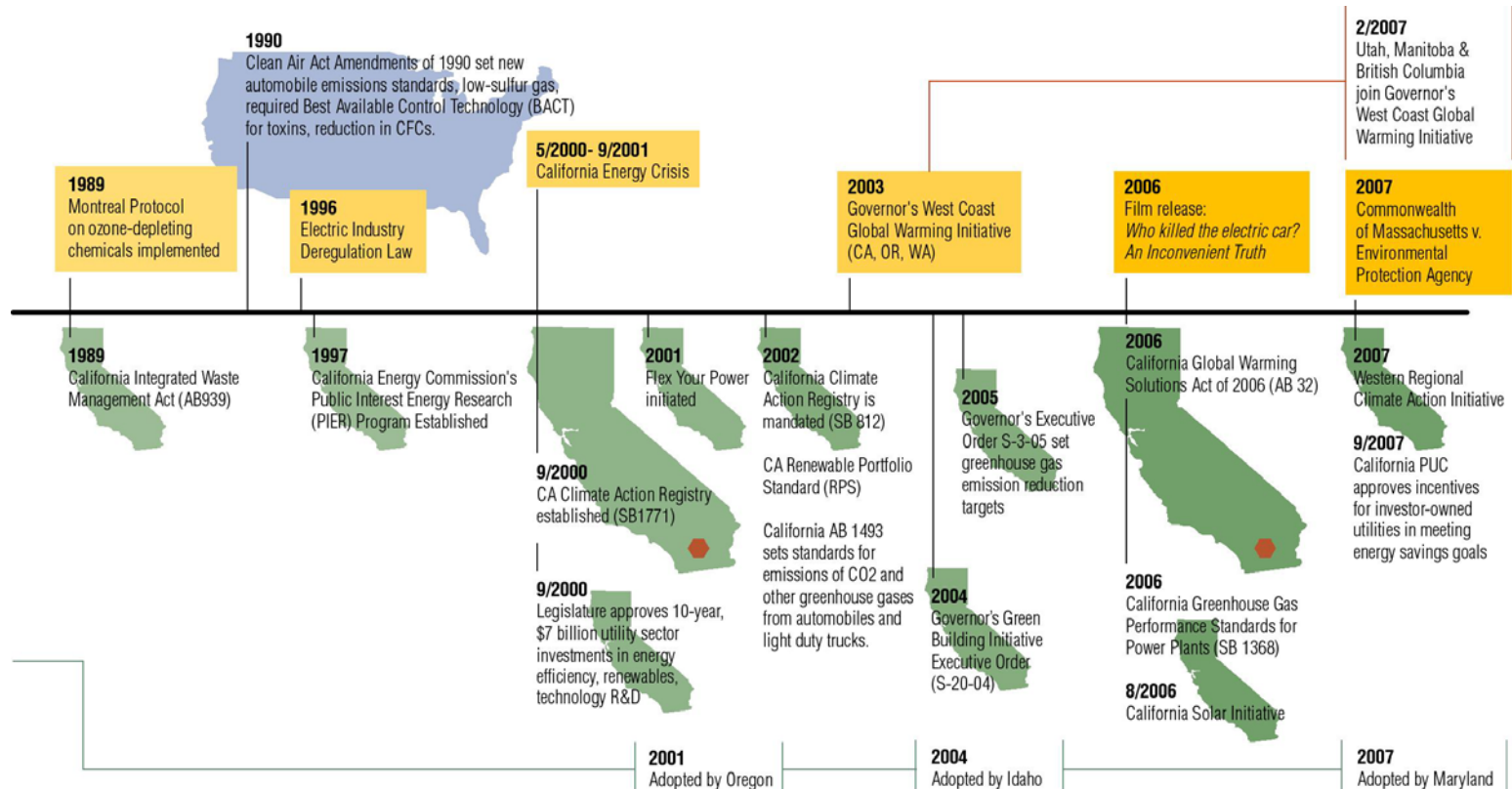
POLICY INNOVATIONS: 1947-1987

California Policy Innovations Over Time (Regulatory, Investment, Incentives) Set in Context with U.S. Policy Innovations and Other Historical Events



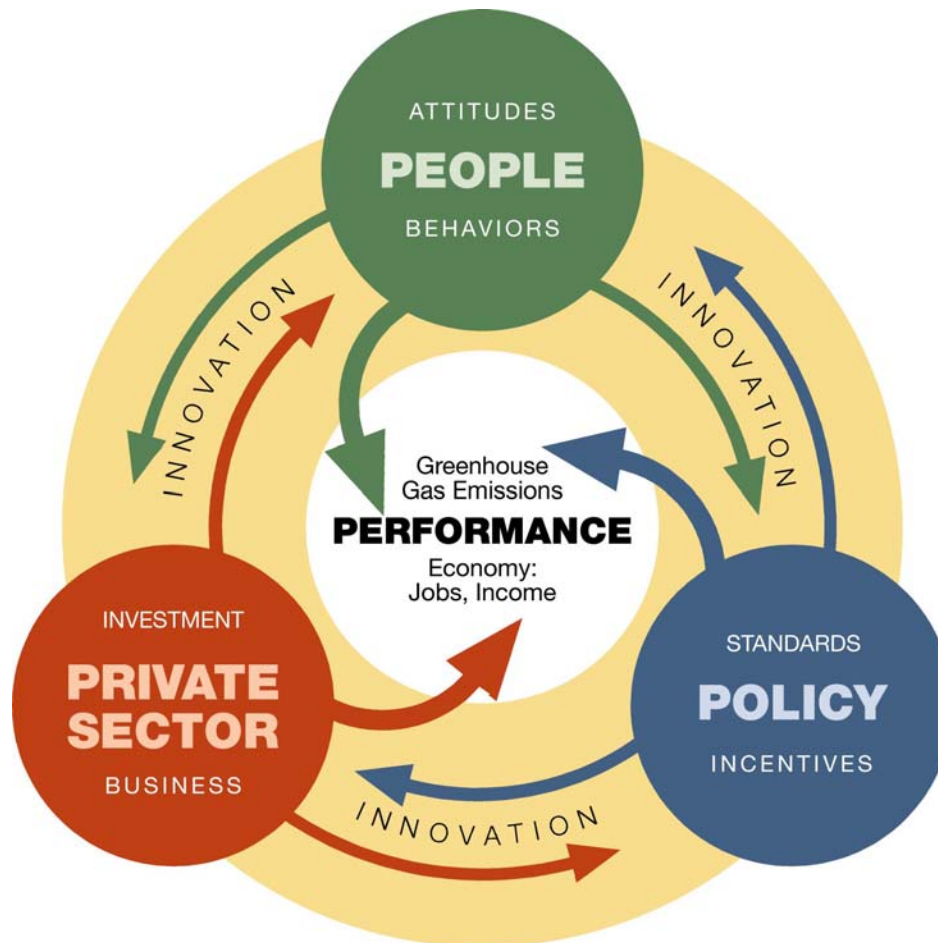


POLICY INNOVATIONS: 1989-2007



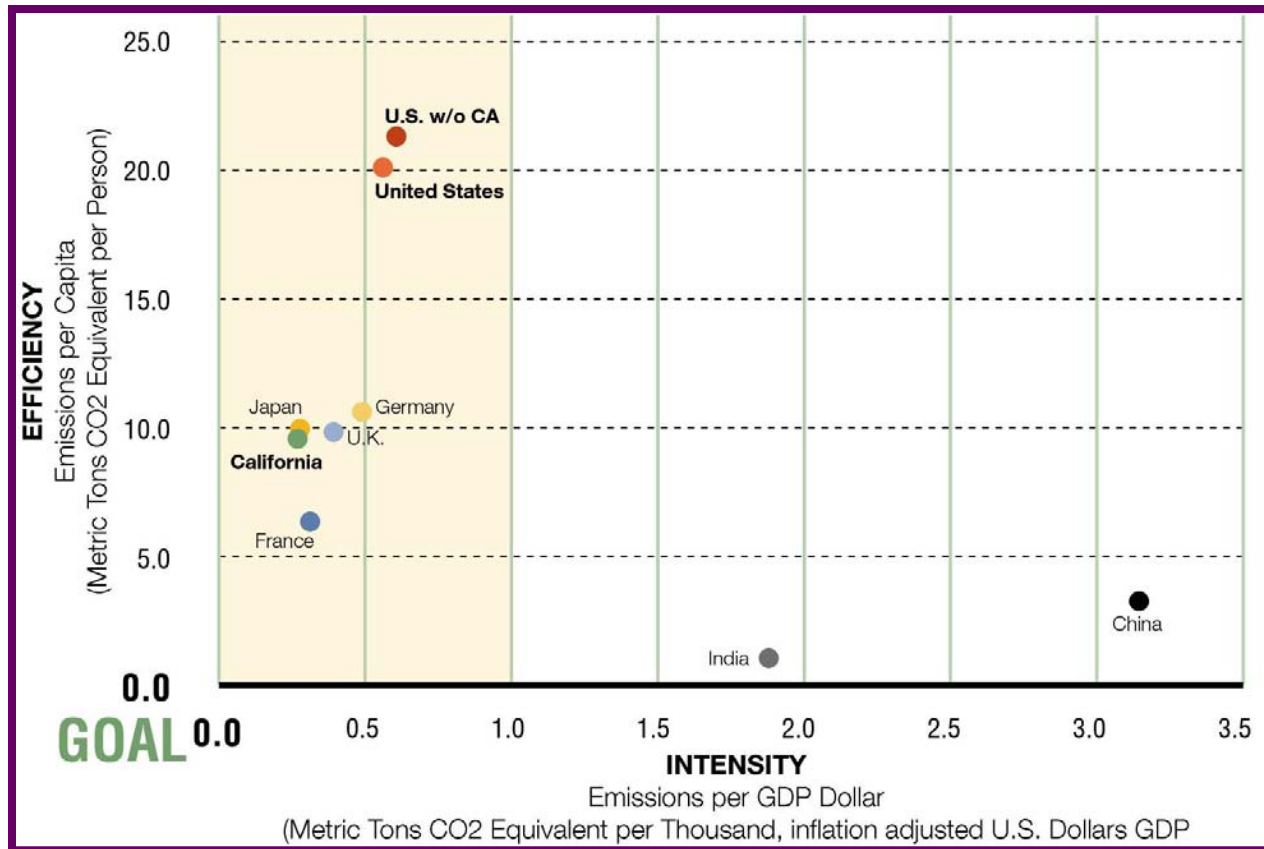


DYNAMICS OF GREEN INNOVATION





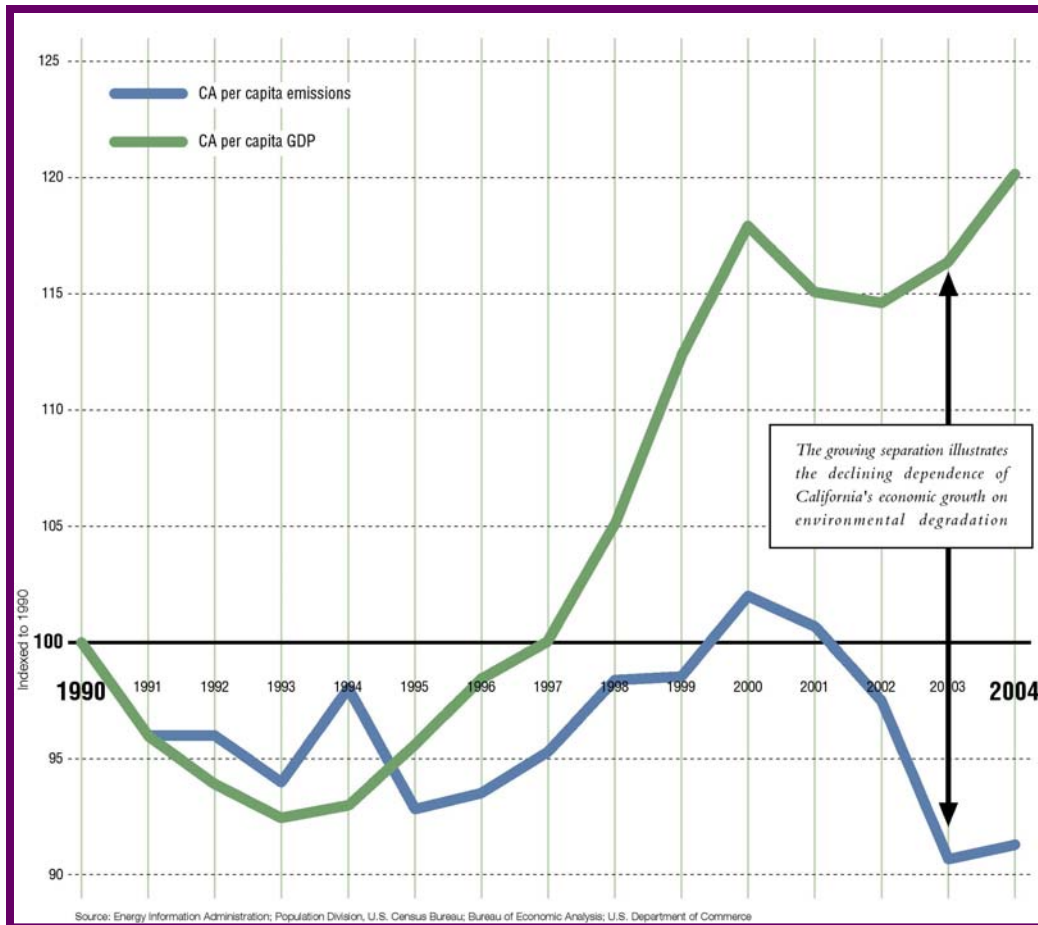
GLOBAL FOSSIL FUEL COMBUSTION



CA is more energy efficient and its economy less carbon intensive than the US.



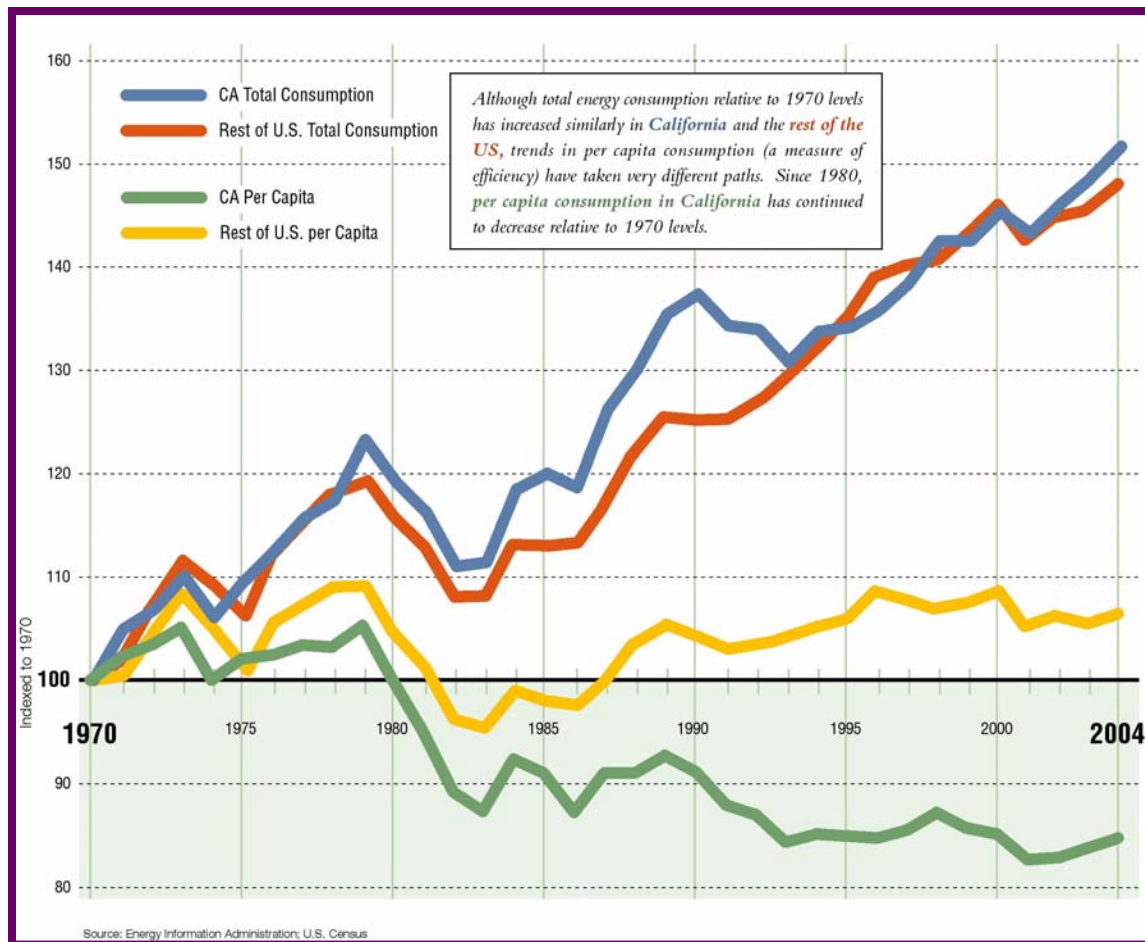
EMISSIONS AND GDP



California's economic growth is increasingly less dependent on the production of greenhouse gases.



TOTAL ENERGY CONSUMPTION



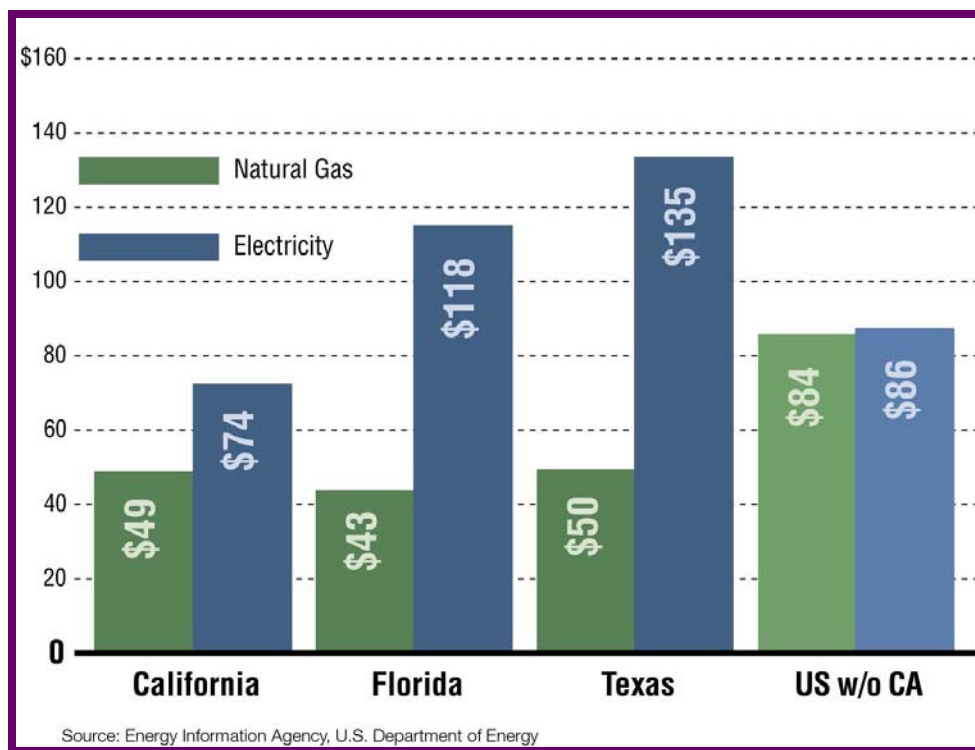
Like the US: total consumption continues to rise.

Unlike the US: CA is more energy efficient now than in 1970.



RESIDENTIAL GAS & ELECTRIC BILLS

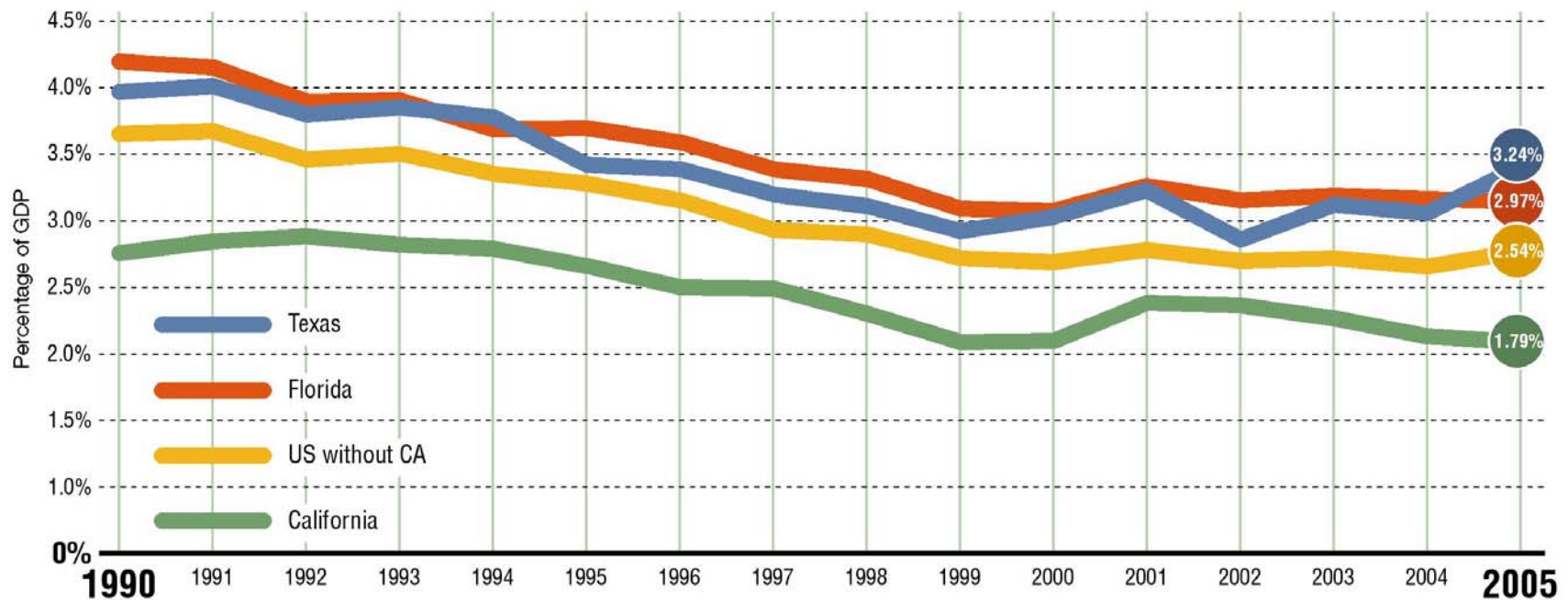
Monthly average, 2005



California's energy efficiency translates into lower bills for consumers.



STATEWIDE ELECTRICITY BILL



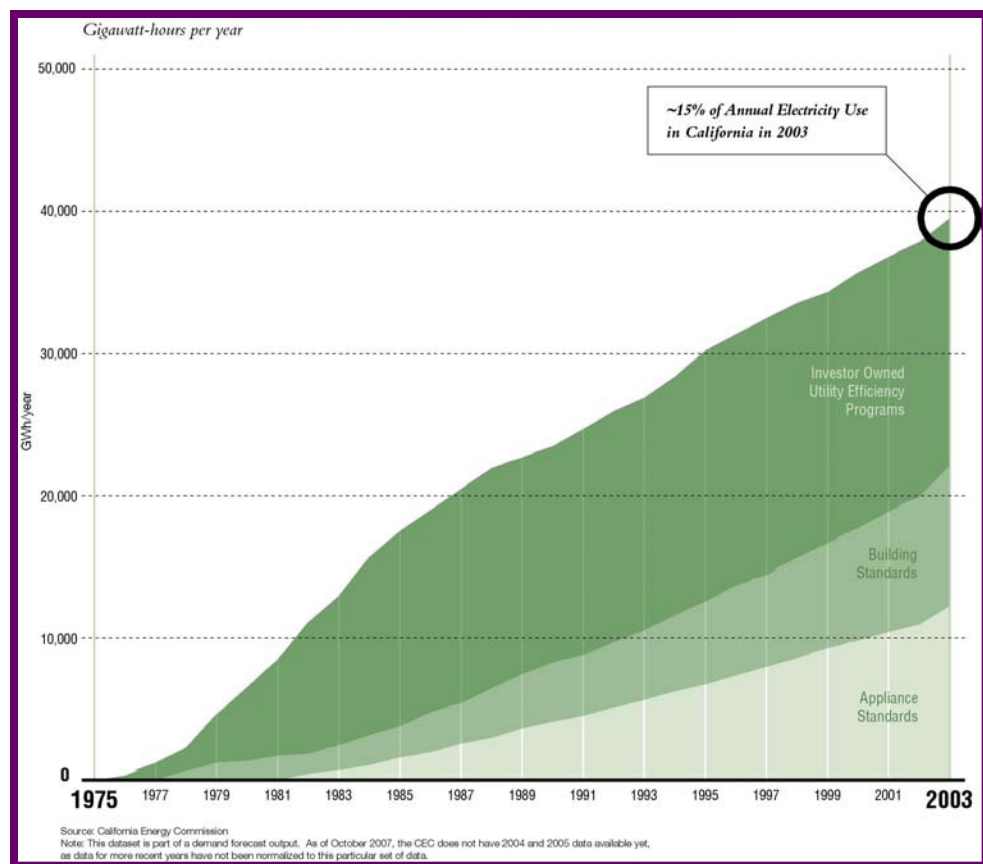
Source: Energy Information Agency, U.S. Department of Energy; Bureau of Economic Analysis, U.S. Department of Commerce

Expressed as a fraction of GDP, CA spends half as much on electricity as Texas.



ANNUAL ENERGY SAVINGS

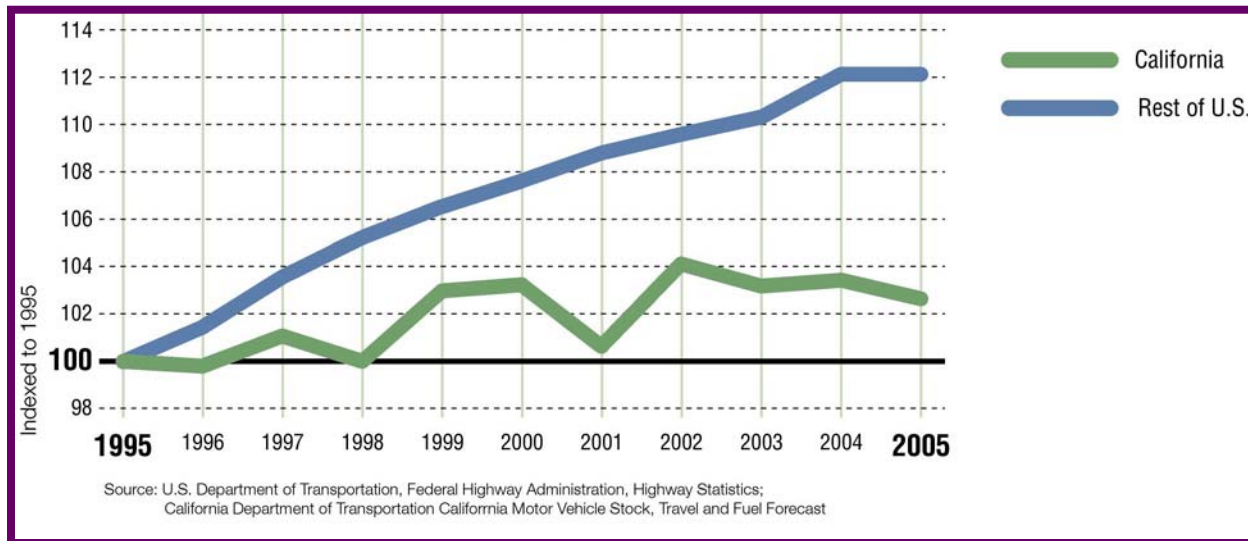
From efficiency programs & standards



In 2003, CA saved 40,000 GW-hours through utility efficiency programs which equated to 15% of total annual electricity use.



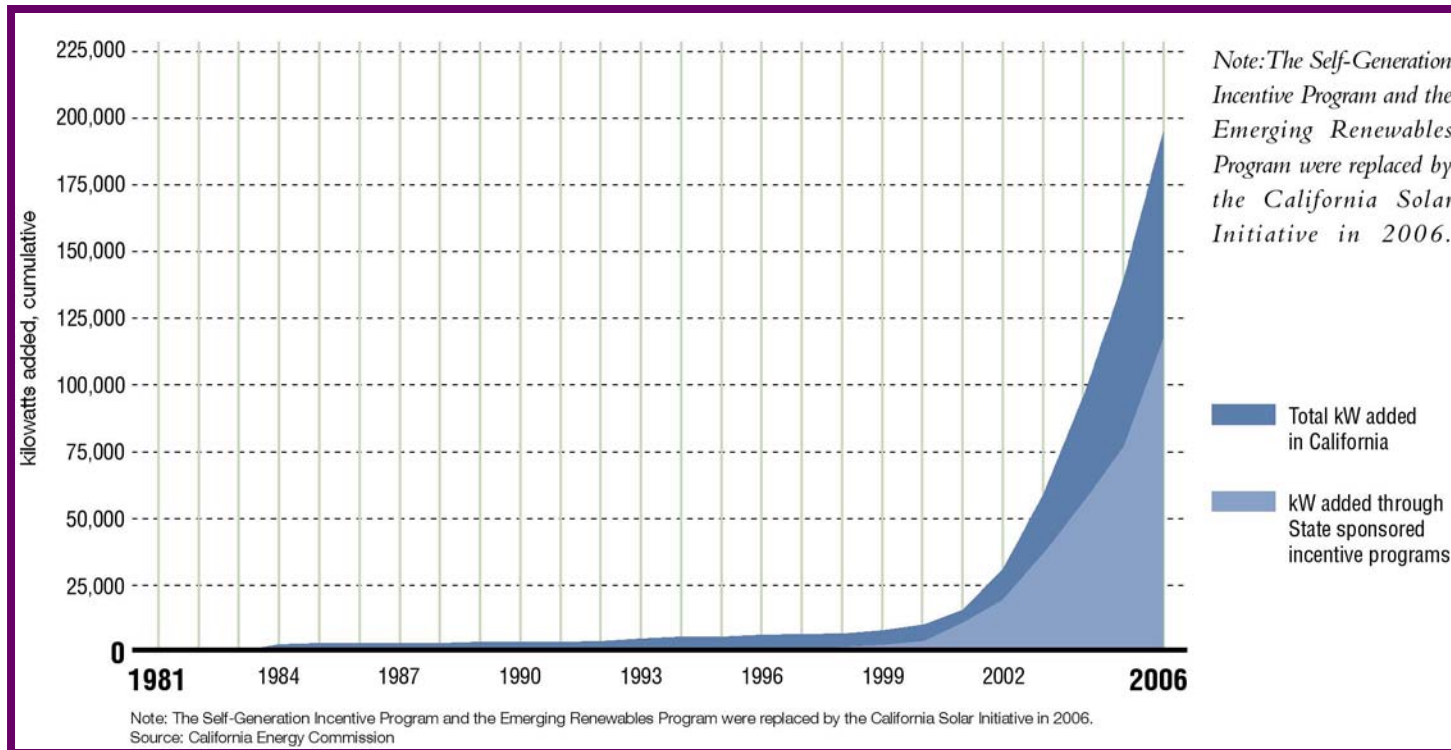
VEHICLE-MILES TRAVELED PER CAPITA



Compared to the rest of the country, vehicle-miles traveled by Californians has increased only modestly.



ENERGY FROM SOLAR INSTALLATIONS IN CA: *Grid-connected solar photovoltaics*



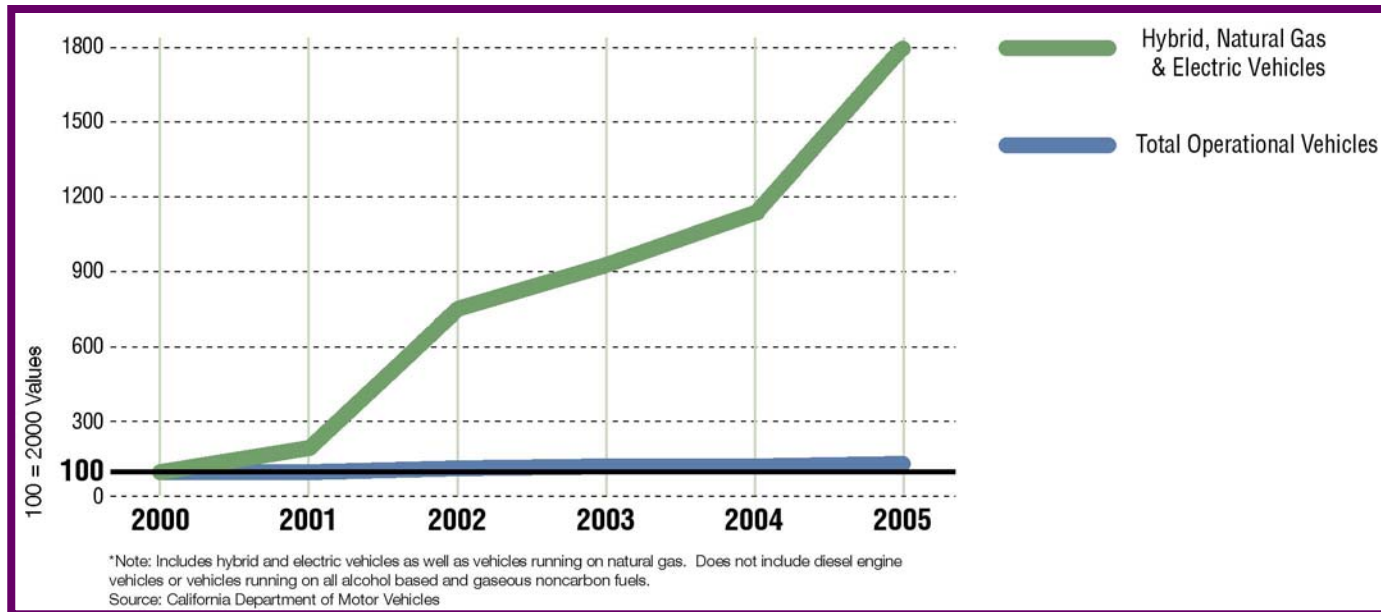
Since 2000 total kW added through solar grew 16 times.

State incentives making impact.



ALTERNATIVE FUEL VEHICLES

Growth in operational vehicles registered

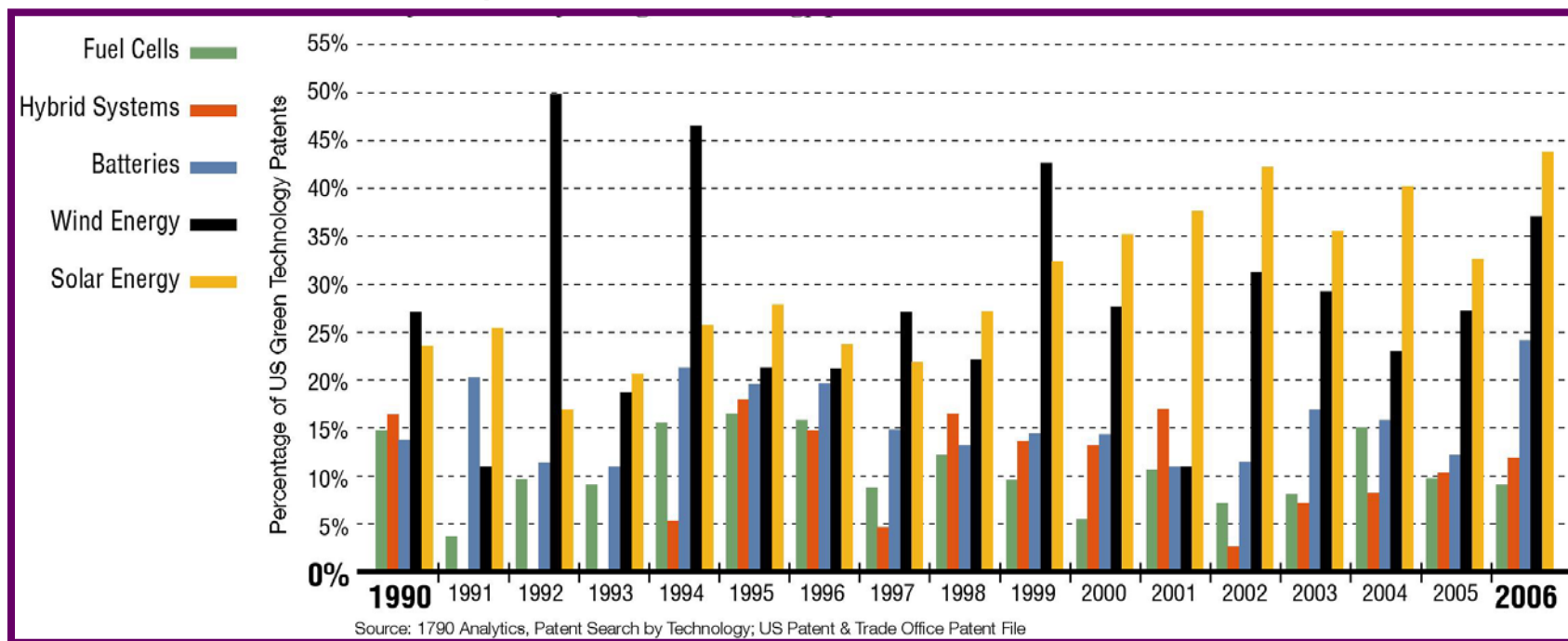


Registrations of alternative fuel vehicles are increasing 18x faster than total vehicle registrations.



PATENTS BY GREEN TECHNOLOGY

CA share of US green tech patents



CA contributes strongly to US patent registrations in green technology: 44% of solar and 37% in wind technologies.



VC INVESTMENT IN ENERGY TECH

Investment in California companies

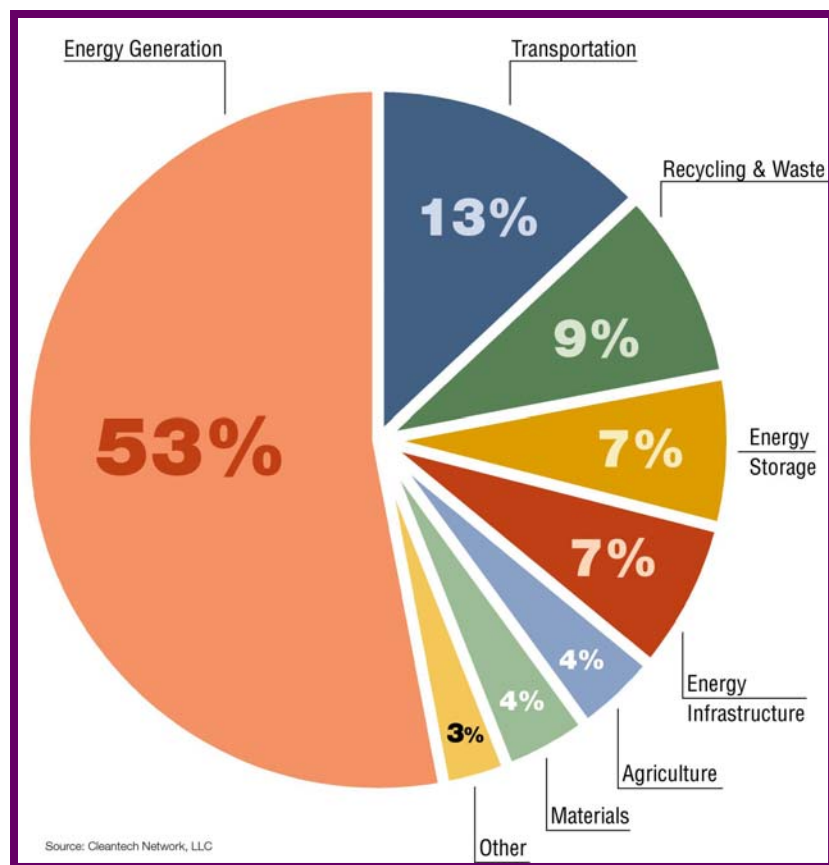


Attracting \$884 million in 2006, California is the top recipient state for energy Venture Capital.



VC INVESTMENT IN CLEAN TECH IN CA

By cleantech segment; Q1-Q2 2007

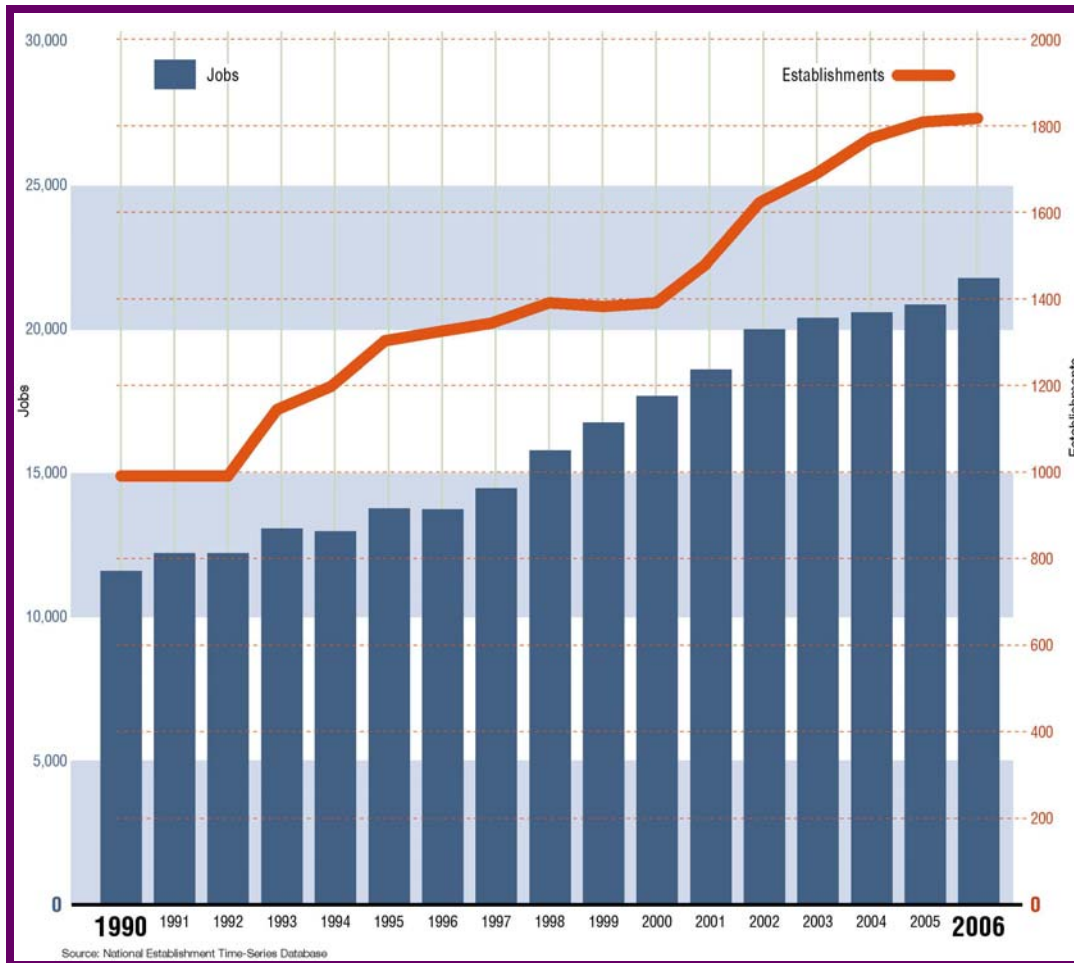


California attracted 49% of all cleantech VC investment in the U.S. during the first half of 2007.

53% was in Energy Generation.

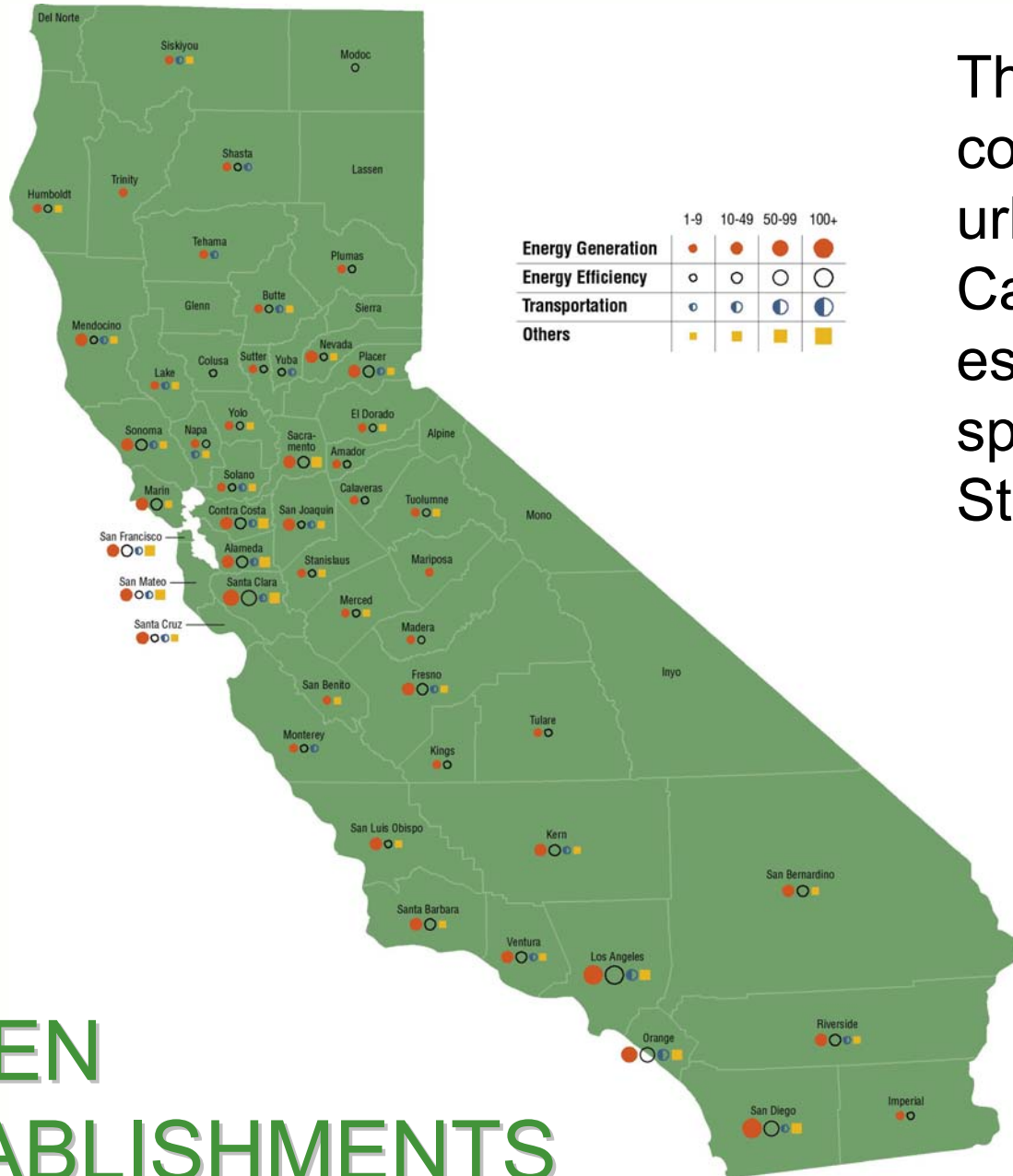


GREEN JOBS & ESTABLISHMENTS: CA



California's green establishments have grown by 84% in number and have added more than 10,000 jobs since 1990.

GREEN ESTABLISHMENTS

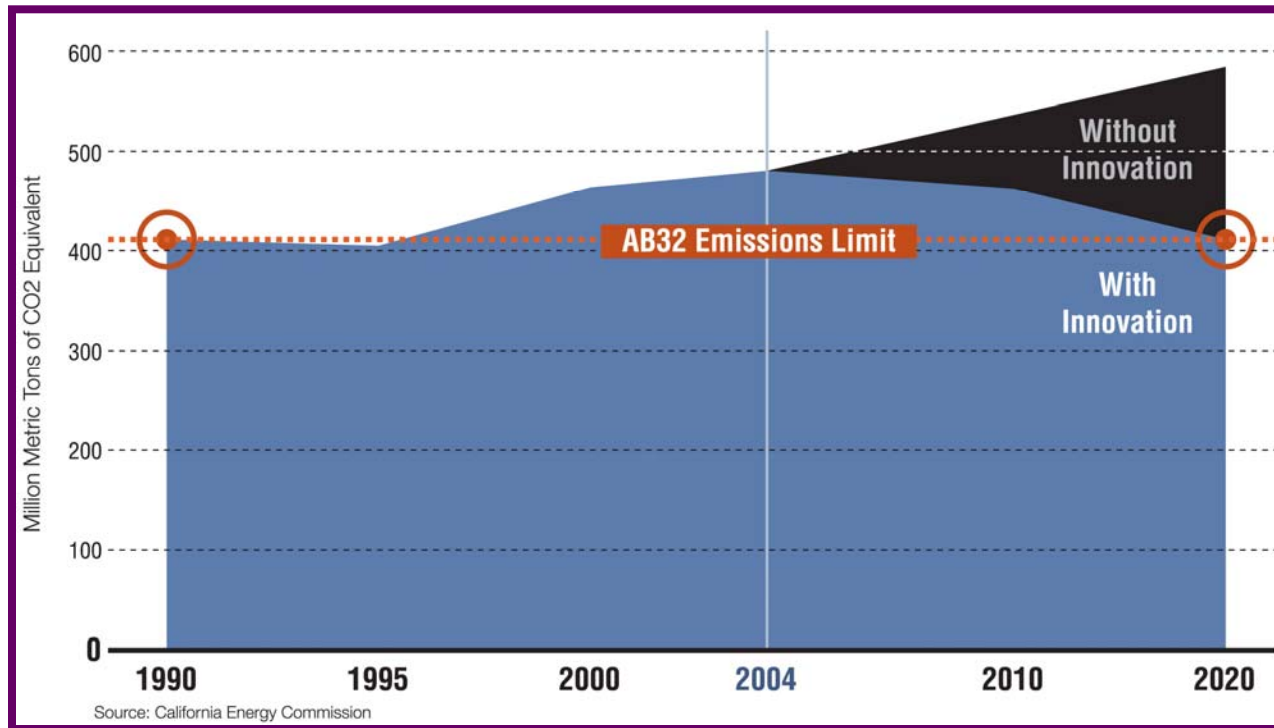


Though more concentrated in urban areas, California's green establishments are spread across the State.



HISTORY OF CA EMISSIONS

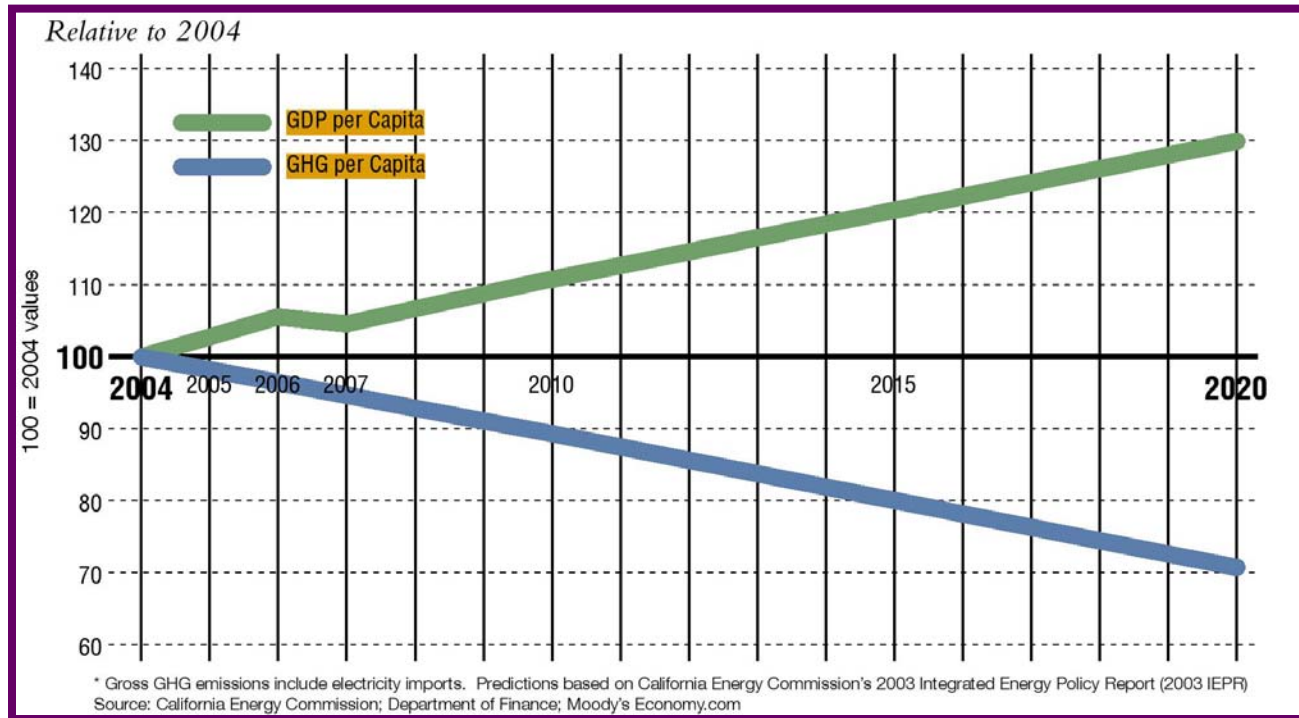
& future AB 32 target



CA needs to rapidly increase its pace of change—from breakthroughs in energy efficiency to adoption of cleaner energy alternatives.



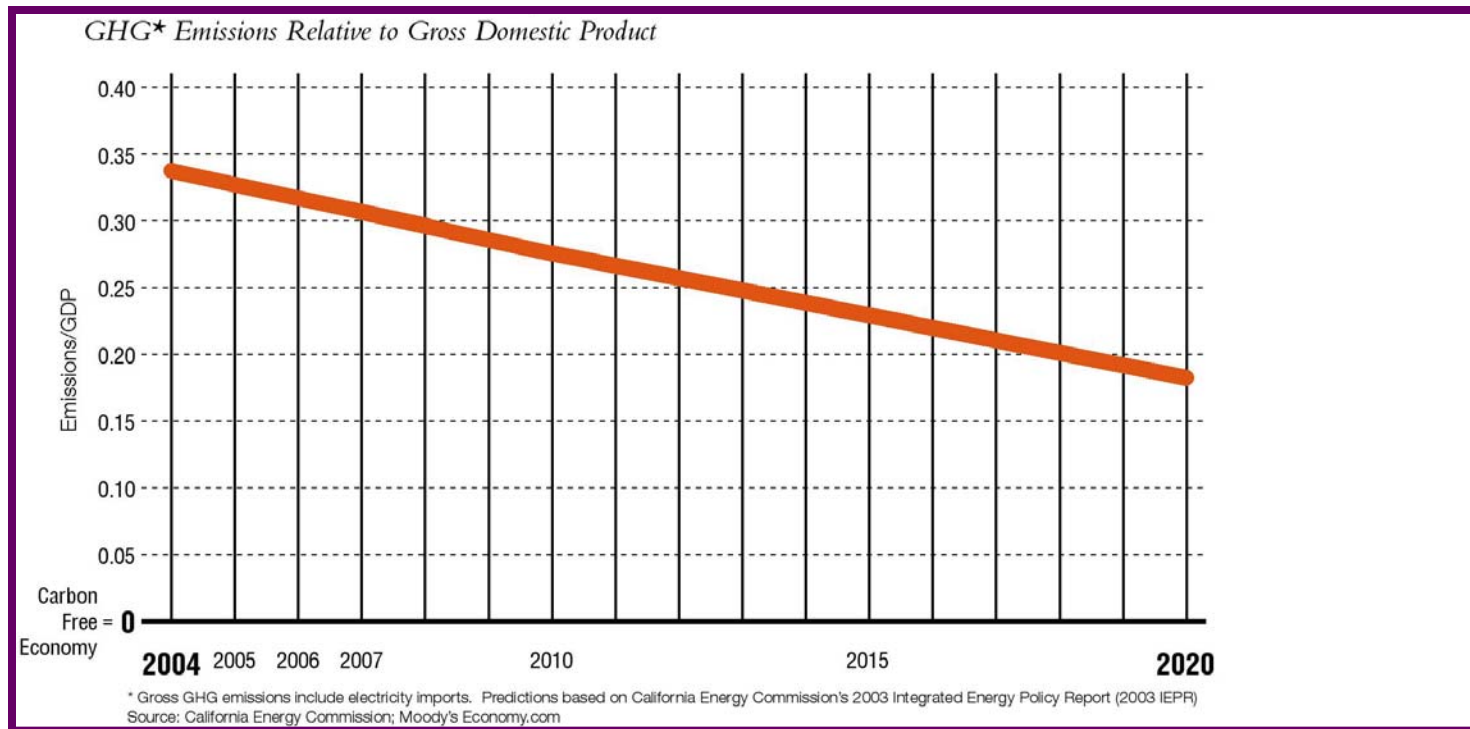
CA GDP & GHG IN 2020



If CA achieves AB 32 targets, the economy will accelerate its separation of economic growth from GHG emissions.



THE 2020 CARBON ECONOMY





NEXT 10/FIELD POLL ON GW ATTITUDES

SURVEY RESULTS:

**Californians Believe We Can Reduce Emissions
and Grow the Economy at the Same Time**

85% agree that California can reduce greenhouse gases that contribute to global warming and expand jobs and economic prosperity at the same time. More than half (54%) agree “strongly” with this statement.

77% agree that firms and government researchers will develop new technologies to solve the problem of global warming; 39% agree “strongly” with this statement.



NEXT 10/FIELD POLL ON GW ATTITUDES

SURVEY RESULTS:

**Californians Believe Many Can
Do A lot To Reduce Global Warming**

	Can Do A lot	Can Do Some
Major Corporations	64%	21%
Gas and Electric Utility Companies	63%	25%
General Public	57%	29%
U.S. Government	56%	28%
Clean Technology Companies	52%	33%
State and Local Government	49%	32%
Non-Profits Dedicated to Reducing Global Warming	44%	36%
Farmers and Agricultural Companies	41%	37%



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